


14-HCAA-01784

	PATH	Action Log Report	Page 1 of 9
		Report Date:	2019/09/10

Title:	Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River
PATH File No:	I4-HCAA-01784
	Habitat File No:
Receive Date:	2014/11/14

Activity:	Action ID No.:	3
To	Action Date:	October 03, 2017
From:	Document Date:	

Description: Status has changed from: Active To Completed
By: Taskey, Lorraine

Action: No Change/No Action Required for this Activity

Time Spent (Hrs): 0.00
Authorization Rationale:

Effective Date:
Expiry Date - HADD/Serious Harm:
Expiry Date - Other :
Compensation/Offsetting:
Included in List of Records:
Species at Risk:

Title: Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River
PATH File No: 14-HCAA-01784
Habitat File No:

Receive Date: 2014/11/14

Activity:

To:
From:

Description:

Action ID No.: 1

Action Date:
Document Date:

December 03, 2014

Correspondence - Do not go to Macro Access Screen
Klukas, Martin
Boyer, Dana

From: Fisheries Protection

Sent: December 3, 2014 10:10 AM

To: Klukas, Martin

Subject: RE: DFO Reviews/Approvals for Outfall Drain Rehabilitation at Chalk River Laboratories
Martin,

The project sounds pretty straight forward and as you have detailed would likely have minimal impact to fish and fish habitat. Or standard procedure is to access our Fisheries Protection Program website and do a Self-Assessment. If needed then a Request for Review form can be submitted for DFO review. However, I think your project would be covered under Self-Assessment under:

- ▼ Project activities and criteria where DFO review is not required
 - ▼ Drainage, Flooding and Erosion Control, Stormwater and Wastewater Management
 - Water Outfalls
 - Construction of, and repairs to, water outfalls
 - No temporary or permanent increase in existing footprint below the High Water Mark
 - No new temporary or permanent fill placed below the High Water Mark
 - All removal activities
- Further...

The *Fisheries Act* requires that projects avoid causing serious harm to fish unless authorized by the Minister of Fisheries and Oceans Canada. This applies to work being conducted in or near waterbodies that support fish that are part of or that support a commercial, recreational or Aboriginal fishery. Following the measures to avoid harm will help you comply with the Act

We request that you visit our website at www.dfo-mpo.gc.ca/habitat and undertake a Self-Assessment to determine if DFO needs to review your project.

Title:
PATH File No:

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If your project IS NOT in one of the listed waterbody types, and its activities ARE NOT listed, nor does it meet the associated criteria (if applicable), you may submit a *Request for Review* to DFO before proceeding further.

If you are UNSURE about whether your project requires DFO review, you can seek support from a qualified environmental professional.

Any more questions or concerns please contact me.

Thank you

Dana Boyter

Fisheries Protection Biologist

Dana.Boyter@dfo-mpo.gc.ca <mailto:Dana.Boyter@dfo-mpo.gc.ca>
905 336-6298

Fisheries and Oceans Canada has changed the way new project proposals (referrals), reports of potential Fisheries Act violations (occurrences) and information requests are managed in Central and Arctic Region (Alberta, Saskatchewan, Manitoba, Ontario, Nunavut and the Northwest Territories). Please be advised that general information regarding the management of impacts to fish and fish habitat and self-assessment tools that enable you to determine Fisheries Act requirements are available at DFO's "Working Near Water" website at www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html <<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>>. For all occurrence reports, or project proposals where you have determined, following self-assessment, that you cannot avoid impacts to fish and fish habitat, please submit to fisheriesprotection@dfo-mpo.gc.ca <<mailto:fisheriesprotection@dfo-mpo.gc.ca>>. For general inquiries you can also call 1 855 852-8320.

Title:
PATH File No:

Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River
14-HCAA-01784
Habitat File No:

Receive Date: 2014/11/14

From: Hoggarth, Thomas
Sent: November 18, 2014 7:40 AM
To: Fisheries Protection; Klukas, Martin
Cc: Thomas, Jennifer
Subject: FW: DFO Reviews/Approvals for Outfall Drain Rehabilitation at Chalk River Laboratories

Martin

I have forwarded your request to our triage group for action.

C. Thomas Hoggarth
Thomas.Hoggarth@dfo-mpo.gc.ca <mailto:Thomas.Hoggarth@dfo-mpo.gc.ca>
Phone 905 336-4764
Cell 905 220-4836

From: Klukas, Martin [<mailto:martin.klukas@cni.ca>]
Sent: November 14, 2014 4:09 PM
To: Hoggarth, Thomas
Cc: Gallagher, Christine; Bauer, Gerald; Winter, Anthony
Subject: DFO Reviews/Approvals for Outfall Drain Rehabilitation at Chalk River Laboratories

Thomas:

Christine Gallagher of Chalk River Laboratories, whom you met last week at the COG workshop, provided me with your contact information.

We would like to discuss with DFO the review/approvals required for the rehabilitation of the Sanitary Sewage Outfall Drain at the Chalk River Laboratories Site.

Title: PATH File No:	Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River 14-HCAA-01784	Receive Date: 2014/11/14
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The Sanitary Sewer outfall extends approximately 90 m into the Ottawa River. The existing outfall drain is a 300 mm diameter corrugated steel pipe that is severely deteriorated. The outfall restoration involves installation of a new liner into the existing pipe. A description of the installation process is provided below. A schematic showing the location of the pipe are attached. The process will have minimum impact on the river bed.

Please advise if you are available to discuss DFO review/approvals for the Outfall Drain Rehabilitation. If not, could you point us to the correct DFO contact.

Thanks

Martin Klukas,
Environmental Analyst, Environmental Protection Branch,
Canadian Nuclear Laboratories
Martin.Klukas@CNL.ca <mailto:Martin.Klukas@CNL.ca>
Tel 613 584 8811 ext 46400

OUTFALL DRAIN REHABILITATION

The following provides a summary of the proposed works for the Outfall Drain at the Chalk River CNL Site. The following provides a brief summary of the existing outfall drain.

The existing pipe is a 300mm diameter corrugated steel pipe (CSP) that is severely deteriorated and is in need of imminent repair. In December 2013, a site investigation consisting of CCTV, in water diving and topographical survey technologies were completed (as much as possible) confirming the pipe's condition.

The pipe starts at access structure 4D-11 and runs east into the Ottawa River where it discharges the treated sanitary sewage.

The pipe is 153.9m long. 46.6m from structure 4D-11 is another structure (4D-12).

About 65m of the outfall drain is located on land (maximum depth is 4.5m), with the remaining

Title: Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River
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88.9m buried under the river bed, below the water surface. The outlet does not have a diffuser. Proposed work for Outfall Drain Rehabilitation:

- Structure 4D-12 will be removed and a new structure built at the same location. This will require some shrub removal, excavation and building of a precast concrete structure segments, 1200mm diameter. All on land. The ground will be restored with topsoil and seed and mulch.
- A new structure will be installed about 15m downstream of structure 4D-11. This is required for the new tie in point for the new sanitary sewage treatment plant discharge. This will be completed by excavating at this location to about a 3 m depth, and a new precast concrete structure installed. Ground will be restored with topsoil and either sodding or seed and mulch.
- From structure 4D-11 to 4D-12, this section will be lined with a Cured-in-Place Liner by inserting at 4D-11 and moving towards 4D-12. The CSP will be cleaned and any items that will impact the liner operation will be removed, all done from within the pipe, collected from structure 4D-11 or 4D-12 and disposed of appropriately. The curing of the liner will be done either by using a UV light train or heated water/steam. No compounds will be allowed to be released into the Ottawa River. All would be collected at the structures and disposed of appropriately.
- From structure 4D-12 to the outlet in the Ottawa River, this will be completed by pipe bursting. The first step will require the placement of a stringer (small line inside the CSP) that will be used to attach a pulling cable for the pipe bursting machine when ready for insertion. The intent is to install a 300mm diameter HDPE pipe inside the 300mm diameter CSP. The HDPE pipe will be fused together into a 107.3 m long piece on land and then floated out to the Outfall Drain outlet point when ready for the insertion. A barge will be set up to assist in the pipe bursting operation. With the assist of divers, the pipe bursting machine will be set up at the outlet drain outlet point. The winch or pulling mechanism will be set up in structure 4D-12. The pipe bursting machine will be pulled through the existing CSP cutting it open to a size just enough to allow the new 300mm HDPE pipe to be inserted. This will all happen at the same time. The pipe bursting machine will be pulled from the outlet point back to structure 4D-12, the HDPE pipe is attached directly to the pipe bursting machine, thus the insertion is completed in one pass. No disruption to the river bed will occur along the alignment of the outfall drain underwater using this method. Directly at the outfall drain outlet point, the divers and insertion of the 300mm diameter pipe bursting machine will have some river bed impact but in a very small area. The 300mm diameter HDPE pipe would remain on the water surface until inserted into the 300mm CSP.

Title: PATH File No:	Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River 14-HCAA-01784 Habitat File No:	Receive Date: 2014/11/14
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Action: Triage - Web Self-Assessment Can be Used

Effective Date:
Expiry Date - HADD/Serious Harm:
Expiry Date - Other :
Compensation/Offsetting:
Included in List of Records:
Species at Risk

Time Spent (Hrs): 0.00
Authorization Rationale:

Title: Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River
PATH File No: 14-HCAA-01784
Habitat File No:

Receive Date: 2014/11/14

Activity:

To:

From:

Description:

Action ID No.: 2

Action Date:

Document Date:

Correspondence - Do not go to Macro Access Screen

November 14, 2014

From: Klukas, Martin [<mailto:martin.klukas@cnl.ca>]
Sent: November 14, 2014 4:09 PM
To: Höggerth, Thomas
Cc: Gallagher, Christine; Bauer, Gerald; Winter, Anthony
Subject: DFO Reviews/Approvals for Outfall Drain Rehabilitation at Chalk River Laboratories

Thomas:

Christine Gallagher of Chalk River Laboratories, whom you met last week at the COG workshop, provided me with your contact information.

We would like to discuss with DFO the review/approvals required for the rehabilitation of the Sanitary Sewage-Outfall Drain at the Chalk River Laboratories Site.

The Sanitary Sewer outfall extends approximately 90 m into the Ottawa River. The existing outfall drain is a 300 mm diameter corrugated steel pipe that is severely deteriorated. The outfall restoration involves installation of a new liner into the existing pipe. A description of the installation process is provided below. A schematic showing the location of the pipe are attached. The process will have minimum impact on the river bed.

Please advise if you are available to discuss DFO review/approvals for the Outfall Drain Rehabilitation. If not, could you point us to the correct DFO contact.

Thanks

Martin Klukas,
Environmental Analyst, Environmental Protection Branch,
Canadian Nuclear Laboratories
Martin.Klukas@CNL.ca <mailto:Martin.Klukas@CNL.ca>
Tel 613 584 8811 ext 46400

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 - The pipe starts at access structure 4D-11 and runs east into the Ottawa River where it discharges the treated sanitary sewage.
 - The pipe is 153.9m long. 46.6m from structure 4D-11 is another structure (4D-12).
 - About 65m of the outfall drain is located on land (maximum depth is 4.5m), with the remaining 88.9m buried under the river bed, below the water surface. The outlet does not have a diffuser.
- Proposed work for Outfall Drain Rehabilitation:
- Structure 4D-12 will be removed and a new structure built at the same location. This will require some shrub removal, excavation and building of

Title: Water outfall, Chalk River Laboratories (AECL), Ottawa River, Deep River
 PATH File No: 14-HCAA-01784
 Habitat File No:

Receive Date: 2014/11/14

a precast concrete structure segments, 1200mm diameter. All on land. The ground will be restored with topsoil and seed and mulch.

A new structure will be installed about 15m downstream of structure 4D-11. This is required for the new tie in point for the new sanitary sewage treatment plant discharge. This will be completed by excavating at this location to about a 3 m depth, and a new precast concrete structure installed. Ground will be restored with topsoil and either sodding or seed and mulch.

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From structure 4D-12 to the outlet in the Ottawa River, this will be completed by pipe bursting. The first step will require the placement of a stringer (small line inside the CSP) that will be used to attach a pulling cable for the pipe bursting machine when ready for insertion. The intent is to install a 300mm diameter HDPE pipe inside the 300mm diameter CSP. The HDPE pipe will be fused together into a 107.3 m long piece on land and then floated out to the Outfall Drain outlet point when ready for the insertion. A barge will be set up to assist in the pipe bursting operation. With the assist of divers, the pipe bursting machine will be set up at the outlet drain outlet point. The winch or pulling mechanism will be set up in structure 4D-12. The pipe bursting machine will be pulled through the existing CSP cutting it open to a size just enough to allow the new 300mm HDPE pipe to be inserted. This will all happen at the same time. The pipe bursting machine will be pulled from the outlet point back to structure 4D-12, the HDPE pipe is attached directly to the pipe bursting machine, thus the insertion is completed in one pass. No disruption to the river bed will occur along the alignment of the outfall drain underwater using this method. Directly at the outfall drain outlet point, the divers and insertion of the 300mm diameter pipe bursting machine will have some river bed impact but in a very small area. The 300mm diameter HDPE pipe would remain on the water surface until inserted into the 300mm CSP.

Action:

Triage - Request for Review Form/Proxy Received

Effective Date:

Expiry Date - HADD/Serious Harm:

Expiry Date - Other :

Compensation/Offsetting:

Included in List of Records:

Species at Risk:

Time Spent (Hrs):

0.00

Authorization Rationale:

IS-HCAA - 00299



PATH

Action Log Report

Page 1 of 6

Report Date: 2019/09/10

Title:
PATH File No:

Hydrant Installation, Ottawa River, Rolphdon, Ontario
15-HCAA-00299

Habitat File No:

Receive Date: 2015/03/13

Activity:

To

From:

Description:

Action:

Time Spent (Hrs):

Authorization Rationale:

Note to File

Status has changed from: Active To Completed
By: Kiriuk, Rick

No Change/No Action Required for this Activity

0.00

Action ID No.:

Action Date:

Document Date:

3

March 24, 2015

Effective Date:

Expiry Date - HADD/Serious Harm:

Expiry Date - Other :

Compensation/Offsetting:

Included in List of Records:

Species at Risk:

Title: PATH File No:	Hydrant Installation, Ottawa River, Rolphton, Ontario 15-HCAA-00299	Habitat File No:	Receive Date: 2015/03/13
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Activity:	Correspondence - Do not go to Macro Access Screen	Action ID No.: 2
To:		Action Date: March 24, 2015
From:		Document Date:

Description:

From: Fisheries Protection
Sent: March-24-15 2:12 PM
To: Gallagher, Christine
Subject: RE: Request for Project Review

Dear Ms. Gallagher:

Subject: Serious harm to fish can be avoided or mitigated.

Hydrant Installation, Ottawa River, Rolphton, Ontario
DFO File #: 15-HCAA-00299

The Fisheries Protection Program (the Program) of Fisheries and Oceans Canada received your dry hydrant installation proposal which has been reviewed under the Fisheries Act and the Species at Risk Act.

Based on the information provided, your proposal has been identified as a project where a Fisheries Act authorization is not required given that serious harm to fish can be avoided by following standard measures, and a Permit under the Species at Risk Act is not required since there are no Species at Risk near the project site. Proposals in this category are not considered to need an authorization from the Program under the Fisheries Act in order to proceed.

In order to comply with the Fisheries Act, it is recommended that you follow our guidance tools which can be found at the following website ([<<http://www.dfo-mpo.gc.ca/pnw-ppe/measure-mesures/index-eng.html>>](http://www.dfo-mpo.gc.ca/pnw-ppe/measure-mesures/index-eng.html)). It remains your responsibility to meet the other requirements of federal, provincial and municipal agencies.

It remains your responsibility to ensure you avoid causing serious harm to fish in compliance with the *Fisheries Act*, and that you meet the requirements under the *Species at Risk Act* as it may apply to your project. Should your plans change or if you have omitted some information in your proposal such that

Title:
PATH File No:

Hydrant Installation, Ottawa River, Rolphton, Ontario
15-HCAA-00299

Habitat File No:

Receive Date: 2015/03/13

your proposal meets the criteria for a site specific review, as described on our website (<<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>>), you should complete and submit the request for review form that is also available on the website.

Please be advised that it is also your *Duty to Notify* DFO if you have caused, or are about to cause, serious harm to fish that are part of or support a commercial, recreational or Aboriginal fishery. Such notifications should be directed to <<http://www.dfo-mpo.gc.ca/pnw-ppe/violation-infraction/index-eng.html>>.

Should you have any questions or concerns about the compliance of your proposal with the *Fisheries Act* and/or those prohibitions of the *Species at Risk Act* that apply to listed aquatic species, you may wish to engage an environmental professional familiar with measures to avoid impacts to fish and fish habitat (<<http://www.dfo-mpo.gc.ca/pnw-ppe/env-pro-eng.html>>).

Yours sincerely,

Jennifer Thomas
A/Team Leader, Triage and Planning
Fisheries and Oceans Canada

Fisheries and Oceans Canada has changed the way new project proposals (referrals), reports of potential Fisheries Act violations (occurrences) and information requests are managed in Central and Arctic Region (Alberta, Saskatchewan, Manitoba, Ontario, Nunavut and the Northwest Territories). Please be advised that general information regarding the management of impacts to fish and fish habitat and self-assessment tools (e.g. Measures to Avoid Harm) that enable you to determine Fisheries Act requirements are available at DFO's "Projects Near Water" website at www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html <<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>>. For all occurrence reports, or project proposals where you have determined, following self-assessment, that you cannot avoid impacts to fish and fish habitat, please submit to fisheriesprotection@dfo-mpo.gc.ca <<mailto:fisheriesprotection@dfo-mpo.gc.ca>>. For general inquiries call 1 855 852-8320.

Title:
PATH File No:

Hydrant Installation, Ottawa River, Rolphiton, Ontario
15-HCAA-00299

Habitat File No:

Receive Date: 2015/03/13

From: Gallagher, Christine [<mailto:christine.gallagher@cni.ca>]

Sent: March-13-15 2:50 PM

To: Buck, Kathleen; Hoggarth, Thomas

Cc: Morin, Annie; Baidwan, Robby; Dolinar, George; Vickard, Meggan; Aikens, Ernie; Matasich, Chris

Subject: Request for Project Review

UNRESTRICTED | ILLIMITÉ

Hi Thomas and Kathleen,

Attached is a request for a project review for work that is occurring at our Rolphiton, Ontario site to install a dry hydrant. Also attached are some pictures and a map of the area. The current plan is to perform this early April and the work will only take ~ 2 weeks, however, if the area is not thawed at that time it may be pushed back (hence the reason for the long construction start and end time on the review form). Please let us know whether this would be possible.

Regards,

Christine Gallagher
Environmental Protection Program Manager
+ Building 700, Room 263A, Str: 700D
((613) 584-8811 ext 43203
1 Fax: (613) 584-8232
. e-mail: christine.gallagher@cni.ca <mailto:gallagherc@aecl.ca>

Please note my new e-mail address

Action:

Triage – Regulatory Review NOT Required

Effective Date:

Expiry Date - HADD/Serious Harm:

Expiry Date - Other :

Compensation/Offsetting:

Included in List of Records:

Species at Risk:

Time Spent (Hrs):

Authorization Rationale:

0.00



Fisheries & Oceans
Pêches et Océans

Warning: Information in PATH may be private and/or sensitive and should not be shared without appropriate consultation and/or permission. Refer to the Data and System Security section of the PATH Helpfiles for details

Habitat Management

000015

Title:
PATH File No:

Hydrant Installation, Ottawa River, Rolphton, Ontario
15-HCAA-00299

Habitat File No:

Receive Date: 2015/03/13

Activity:

To:

From:

Description:

Action ID No.: 1

Correspondence - Do not go to Macro Access Screen

Action Date:

March 13, 2015

Document Date:

From: Gallagher, Christine [mailto:christine.gallagher@cnl.ca]

Sent: March-13-15 2:50 PM

To: Buck, Kathleen; Hoggarth, Thomas

Cc: Morin, Annie; Baidwan, Robby; Dolinar, George; Vickard, Meggan; Aikens, Ernie; Matasich, Chris

Subject: Request for Project Review

UNRESTRICTED | ILLIMITÉ

Hi Thomas and Kathleen,

Attached is a request for a project review for work that is occurring at our Rolphton, Ontario site to install a dry hydrant. Also attached are some pictures and a map of the area. The current plan is to perform this early April and the work will only take ~ 2 weeks, however, if the area is not thawed at that time it may be pushed back (hence the reason for the long construction start and end time on the review form). Please let us know whether this would be possible.

Regards,

**Christine Gallagher
Environmental Protection Program Manager**

+ Building 700, Room 263A, Str: 700D

(613) 584-8811 ext 43203

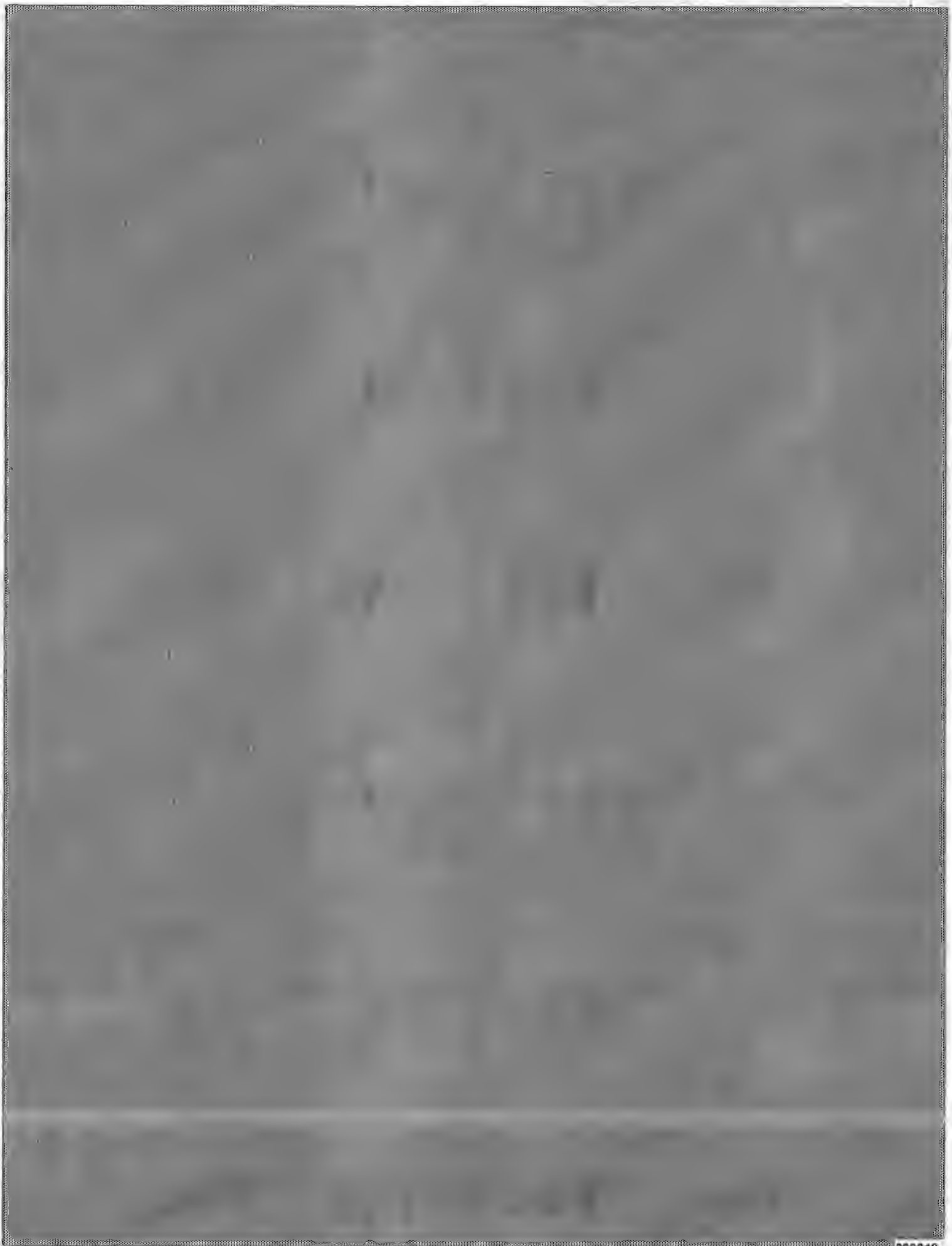
1 Fax: (613) 584-8232

. e-mail: christine.gallagher@cnl.ca <mailto:gallagherc@aed.ca>

Please note my new e-mail address

Title: PATH File No: 15-HCAA-00299		Habitat File No:		Receive Date: 2015/03/13	
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Action:		Triage - Request for Review Form/Proxy Received		Effective Date:	
Time Spent (Hrs):		0.00		Expiry Date - HADD/Serious Harm:	
Authorization Rationale:				Expiry Date - Other :	
				Compensation/Offsetting:	
				Included in List of Records:	
				Species at Risk:	
Directory:					
File Name:		DFO Request for Review at NP		File Extension:	
Document Type (Upload):		FFHPP - Request for Review Form		File Size:	
				pdf 6,153,334	
Directory:					
File Name:		Fire Hydrant 2015		File Extension:	
Document Type (Upload):		FFHPP - Request for Review - Supporting Documents		File Size:	
				jpg 297,031	
Directory:					
File Name:		DSCN0273		File Extension:	
Document Type (Upload):		FFHPP - Request for Review - Supporting Documents		File Size:	
				jpg 196,095	
Directory:					
File Name:		DSCN0272		File Extension:	
Document Type (Upload):		FFHPP - Request for Review - Supporting Documents		File Size:	
				jpg 105,863	





Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada

Request for Review

A) Contact information

Name of Business/Company:

Canadian Nuclear Laboratories (CNL)

Name of Proponent:

Robby Baidwan

Mailing address:

Canadian Nuclear Laboratories
286 Plant Road
Mail Stn 845

City/Town:

Chalk River

Province/Territory:

Ontario

Postal Code:

K0J 1J0

Tel. No. :

613-584-3311 ext 44708

Fax No.:

Email:

Robby.Baidwan@cnl.ca

Select additional contact:

Contractor/Agency/Consultant (if applicable):

Mailing address:

City/Town:

Province/Territory:

Postal Code:

Tel. No. :

Fax No.:

Email:

Is the Proponent the main/primary contact? ☐ Yes ☒ No

If no, please enter information for the primary contact or any additional contact.

Christine Gallagher
Christine.Gallagher@cnl.ca
613-584-3311 ext. 43203



B) Description of Project

If your project has a title, please provide it.

Installation of a dry hydrant at CNL NPD site, Rolphton, ON

Is the project in response to an emergency circumstance? ☐ Yes ☒ No

Does your project involve work in water? ☒ Yes ☐ No

If yes, is the work below the High Water Mark? ☒ Yes ☐ No

What are you planning to do? Briefly describe all project components you are proposing in or near water.

A dry hydrant system is to be installed at the Nuclear Power Demonstration Waste Facility (NPDWF) in Rolphton, Ontario. The facility consists of a permanently shut down, partially decommissioned demonstration CANDU reactor and associated structures. During the first phase of decommissioning all water supply was removed from the facility (i.e. pump house was removed from service and decommissioned). The water intake is necessary to supply the local fire department pumper and increase the capability of fighting fires at the facility as well as forest fires. The installation of the dry hydrant system is the result of a recent Fire Hazard Analysis assessment which utilized National Building Code of Canada (NBCC), National Fire Code of Canada (NFCC) and National Fire Protection Association (NFPA) 801 requirements. CNL contracted exp Services Inc. to design the dry hydrant. The hydrant will consist of a vertical section of piping below the hydrant to a suitable depth which will be connected to the river through a horizontal section of piping installed to the desired depth to achieve suitable water level coverage. The local fire department would utilize a portable pump to pump water from the dry hydrant installation to their fire truck. The construction of the dry hydrant system will take approximately two (2) weeks and will occur between April 1st, 2015 and June 26th, 2015.

How are you planning to do it? Briefly describe the construction materials, methods and equipment that you plan to use.

Superficial vegetation and existing asphalt will be removed from the construction area.

All ground surfaces will be evenly graded to reduce ponding areas.

All materials and supplies will be to Ontario Provincial Standard Specification (OPSS) standards (i.e. construction OPSS 206 & 314 materials OPSS 1001 & 1010).

The dry hydrant outlet will be installed ~10m from the water edge at an elevation of 115.48m in the center of a 3mx3m gravel pad of 150mm compacted granular A.

The outlet pipe will be 150mm OD Schedule 40 steel pipe and will be fitted with 150mmOD X 100mmOD female NST thread, internal strainer, rocker lug threaded plug and chain.

The finished grade elevation at the dry hydrant assembly will be 114.83m. The area will be protected by bollards as per B-5953-ST-32 rev. 4.

The outlet pipe will be pre-insulated and extend vertically down to an elevation of 110.95m. A drain away pit with 2 cubic meters of 20mm clear stone will be installed at the connection joint to the intake pipe. Reducer and couplers will be used to increase the 150mm OD outlet pipe to 200mm OD for attachment of the intake pipe.

The intake pipe will be 16m of Schedule 40 PVC pipe (or 20m of HDPE DR21) and will be installed by excavation/trenching on a slope to an elevation of 110m (below the 50 yr drought level established at 110.89m). Clear stone again will be used for the pipe bedding. The intake pipe will extend into a 600mm by 600mm concrete block at the bottom of the pipe excavation.

Reducer and couplers will be used to reduce the 200mm OD to 150mm OD for attachment of the dry hydrant horizontal strainer. The strainer will be tied down with stainless steel clamp and chain fastened to a concrete weight directly below the strainer. A wire mesh will be anchored to the river bottom for strainer protection.

Where the dry hydrant horizontal strainer extends into the river a 2mx3m rip-rap pad, with filter cloth and 150mm rock nominal size under the intake, will be installed as per OPSD 810.01.

All grassed areas disturbed during construction will be restored. The disturbed area of the riverbed will be reinstated with material similar to existing conditions or granular material approved by CNL.

Include a site plan (figure/drawing) showing all project components in and near water.

Are details attached? ☒ Yes ☐ No

Identify which work categories apply to your project.

☐ Aquaculture Operations

☐ Log Handling / Dumps

☐ Aquatic Vegetation Removal

☐ Log Removal



- ☐ Beaches
- ☐ Berms
- ☐ Blasting / Explosives
- ☐ Boat Houses
- ☐ Boat Launches / Ramps
- ☐ Breakwaters
- ☐ Bridges
- ☐ Cable Crossings
- ☐ Causeways
- ☐ Culverts
- ☐ Dams
- ☐ Dewatering / Pumping
- ☐ Docks
- ☒ Dredging / Excavation
- ☐ Dykes
- ☐ Fishways / Ladders
- ☐ Flow Modification (hydro)
- ☐ Groundwater Extraction
- ☐ Groynes
- ☐ Habitat Restoration
- ☐ Ice Bridges

- ☐ Moorings
- ☐ Open Water Disposal
- ☐ Piers
- ☐ Riparian Vegetation Removal
- ☐ Seismic Work
- ☐ Shoreline Protection
- ☐ Stormwater Management Facilities
- ☐ Surface Water Taking
- ☐ Tailings Impoundment Areas
- ☐ Temporary Structures
- ☐ Turbines
- ☐ Water Control Structures
- ☒ Water Intakes / Fish Screens
- ☐ Water Outfalls
- ☐ Watercourse Realignment
- ☐ Weirs
- ☐ Wharves
- ☐ Wind Power Structures

☒ Other Please Specify

Dry hydrant for fire fighting

Was your project submitted for review to another federal or provincial department or agency? ☐ Yes ☒ No

If yes, indicate to whom and associated file number(s).

C) Location of the Project

Coordinates of the proposed project Latitude N Longitude W

OR UTM zone ; Easting
 Northing

Include a map clearly indicating the location of the project as well as surrounding features.

Name of Nearest Community (City, Town, Village):

Rolphon

Municipality, District, Township, County, Province:

Laurentian Hills, Ontario

Name of watershed (if applicable):

Ottawa River Watershed

Name of watercourse(s) or waterbody(ies) near the proposed project:

Ottawa River



Provide detailed directions to access the project site:

The Nuclear Power Demonstration Waste Facility (NPDWF) site is located 17km north of Deep River, Ontario at 36510 Highway 17.

D) Description of the Aquatic Environment

Identify the predominant type of aquatic habitat where the project will take place.

☐ Estuary (Estuarine)

☐ Lake (Lacustrine)

☒ On the b

Provide a detailed description of biological and physical characteristics of the proposed project site.

The dry hydrant water intake will extend approximately 10m into the Ottawa River (below the May 23, 2014 water level). On July 18, 2014, a shoreline characterization was completed (18T 294,970; 5,118,315). Rocks emerging from the water were visible and no aquatic vegetation was noted. The bank substrate was composed of boulders and gravel and signs of erosion were present. The shoreline has been modified in the past allowing for limited vegetation growth.

The Ottawa River width at this location is 500m.

Typical fish species known to be present in the Ottawa River include: Smallmouth Bass; Largemouth Bass; Walleye; Northern Pike; Yellow Perch; Lake Sturgeon; Channel Catfish; Rainbow Smelt; Cisco; Spottail Shiner; and Lake Whitefish.

Include representative photos of affected area (including upstream and downstream area) and clearly identify the location of the project.

E) Potential Effects of the Proposed Project

Have you reviewed the Pathways of Effects (PoE) diagrams (<http://www.dfo-mpo.gc.ca/pnw-pps/pathways-sequences/index-eng.html>) that describe the type of cause-effect relationships that apply to your project?

☒ Yes ☐ No

If yes, select the PoEs that apply to your project.

☐ Addition or removal of aquatic vegetation

☐ Change in timing, duration and frequency of flow

☐ Cleaning or maintenance of bridges or other structures

☐ Dredging

☒ Excavation

☐ Fish passage issues

☐ Grading

☐ Marine seismic surveys

☐ Organic debris management

☐ Placement of marine finfish aquaculture site

☒ Placement of material or structures in water

☐ Riparian Planting

☐ Streamside livestock grazing

☐ Structure removal

☐ Use of explosives

☐ Use of industrial equipment

☐ Vegetation Clearing

☐ Wastewater management

☒ Water extraction

Will there be changes (i.e., alteration) in the fish habitat? ☐ Yes ☒ No ☐ Unknown

If yes, provide description.



Will the fish habitat alteration be permanent? ☐ Yes ☒ No ☐ Unknown

Is there likely to be destruction or loss of habitat used by fish? ☐ Yes ☒ No ☐ Unknown

What is the footprint (area in square meters) of your project that will take place below the high water mark?

The highest point of the slope where the land becomes flat will be used as the high water mark as signs of erosion is visible. The estimated footprint of this project below the high water mark is estimated at approximately 10.32 m² (2mX3m rip-rap pad at the intake point and 12m of PVC pipe below the high water mark embedded in a 600mm X 600 mm concrete block). A very small volume of new fill is being used below the high water mark (i.e. clear stone for pipe bedding and rip-rap pad below intake). Fill that was excavated for the installation of the intake pipe will be reused.

Is your project likely to change water flows or water levels? ☐ Yes ☒ No ☐ Unknown

If your project includes withdrawing water, provide source, volume, rate and duration.

The dry hydrant system will be withdrawing water from the Ottawa River. The required rate is 700 gpm to satisfy the requirements of NFPA 14 and to meet the needs of the portable pump the local fire department will use. The volume of the local fire department's fire truck is 500 Imperial gallons. Water will only be withdrawn during emergency situations (i.e. fire fighting). The total volume and duration will depend on the emergency scenario.

If your project includes water control structure, provide the % of flow reduction.

If your project includes discharge of water, provide source, volume and rate.

Will your project cause death of fish? ☐ Yes ☐ No ☒ Unknown

If yes, how many fish will be killed (for multi-year project, provide average)? What species and lifestages?

Are there aquatic species at risk (http://www.sararegistry.gc.ca/species/aquatic_e.cfm) present? If yes, which ones?

Aquatic species at risk listed under Schedule 1 of the Species at Risk Act and potentially present in the Ottawa River at the project location include:

- Northern Brook Lamprey (GLStL population) (Special Concern); and,
- River Redhorse (Special Concern).

Aquatic species proposed to be added to Schedule 1 of the Species at Risk Act by COSEWIC include:

- American Eel (Threatened);
- Lake Sturgeon (GLStL population) (Threatened); and,
- Hickorynut (Endangered).

What is the time frame of your project?

The construction will start on 04/01/2015 and end by 06/26/2015

If applicable, the operation will start on 06/26/2015 and end by 01/01/2025

If applicable, provide schedule for the maintenance

If applicable, provide schedule for decommissioning

The NPDWF is targeted for decommissioning by 2025. The hydrant system may remain in place to provide a water supply while the facility is



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under Institutional Controls.

Are there additional effects to fish and fish habitat that will happen outside of the time periods identified above? ☐ Yes ☒ No

(If yes, provide details)

Have you considered and incorporated all options for redesigning and relocating your project to avoid negative effects to fish and fish habitat?

☒ Yes ☐ No

If yes, describe.

Original concept design included utilizing existing intake pipes however design proved not feasible. Overland piping was also considered however this option is not considered feasible due to ice build-up on the Ottawa River surface. The site selected is driven by proximity requirements to the NPDWF and was historically used as the water intake for the site when the facility was operational.

Have you consulted DFO's Measures to Avoid Harm to Fish and Fish Habitat (<http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/index-eng.html>) to determine which measures apply to your project?

☒ Yes ☐ No

Will you be incorporating applicable measures into your project? ☒ Yes ☐ No

If yes, identify which ones. If No, identify which ones and provide reasons.

1- Project Planning

1a- Site Selection: The area is not native to the riverbed and is backfill from the original construction of the NPDWF during the 1960s. The design of the intake pipe and strainer is perpendicular to the watercourse. Additionally the area must be of sufficient size for fire department vehicles to access the hydrant and turn around to gain access back to the road without much difficulty. The site selected satisfies those requirements as it was historically used as water inlet to the site.

1b- Contaminant and Spill Management: A response plan is in place (noted in the design and internal CNL protocols) and will be implemented immediately in the event of a sediment release or spill of a deleterious substance. Emergency spill kits will be on site.

2- Erosion and Sediment Control

The design includes an Erosion and Sediment Control Plan for the site that minimizes risk of sedimentation of the waterbody during all phases of the project.

3- Shoreline Re-Vegetation and Stabilization: The design requires the clearing of any vegetation to be kept to a minimum.

4- Fish Protection: The horizontal strainer has been designed for the protection of fish following the DFO guidelines, placement of wire mesh over the strainer and a rip-rap pad under the intake to reduce attractant habitat.

5- Operation of Machinery: All equipment will arrive clean and will not be cleaned nor refueled at the site.

Have you considered and incorporated additional best practices and mitigation measures recommended in relevant guidelines to avoid negative effects to fish and fish habitat?

☐ No ☒ Yes

If Yes, include a list of the guidelines being used to avoid negative effects to fish and fish habitat.

In accordance with best management practices for erosion and sediment control, turbidity curtains, silt fences and strawable check dams shall be installed. Construction and maintenance requirements for erosion and sediment control comply with OPSS 805.

Are there any relevant best practices or mitigation measures that you are unable to incorporate? ☒ Yes ☐ No

(If yes, identify which ones.)

Timing - Contractors are prepared to begin the installation of the dry hydrant system once the ground thaws from winter (early April)



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2015).

Can you follow appropriate Timing Windows (<http://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/index-eng.html>) for all your project activities below the High Water Mark*?

☐ Yes ☒ No

(If no, provide explanations.)

Immediate installation of the dry hydrant is required to increase the fire safety of the facility in order to comply with NBCC, NFCC and NFPA regulations. The facility underwent a period of cold, dark and quiet (unoccupied) for many years, but the facility is now occupied with CNL staff and contractors performing work on a regular basis (often with hazardous materials). The urgent safety need to have this dry hydrant installed has definitely increased as a result of the occupancy at the facility. Contractors are standing by to install the system as soon as the ground thaws (likely April 2015). Completion of this project also meets Canadian Nuclear Safety Commission license commitments (as part of a fire hazard analysis) assigned to CNL as the licensee of this Class 1 Nuclear Facility. Due to the safety needs, obligations to CNL's compliance programs, CNL commitments, and the fact that the footprint of this project is relatively small, CNL is requesting that DFO will allow the work to occur in April 2015.

What residual effects to fish and fish habitat do you foresee after taking into account the avoidance and mitigation measures described above?

The appropriate avoidance and mitigation measures are in place during the construction of the NPDWF dry hydrant system. There are no residual effects anticipated as a result of this project.

F) Signature

I, Christine Gallagher

(print name) certify that the information given on this form is to the best of my knowledge, correct and completed.

Signature

13/03/2015

Date

Information about the above-noted proposed work or undertaking is collected by DFO under the authority of the *Fisheries Act* for the purpose of administering the fisheries protection provisions of the *Fisheries Act*. Personal information will be protected under the provisions of the *Privacy Act* and will be stored in the Personal Information Bank DFO-PPU-680. Under the *Privacy Act*, individuals have a right to, and on request shall be given access to any personal information about them contained in a personal information bank. Instructions for obtaining personal information are contained in the Government of Canada's Info Source publications available at www.infosource.gc.ca or in Government of Canada offices. Information other than "personal" information may be accessible or protected as required by the provision of the *Access to Information Act*.

*All definitions are provided in Section G of the Guidance on Submitting a Request for Review



Guidance on Submitting a Request for Review

This document explains the requirements for a Request for Review by DFO under the fisheries protection provisions of the *Fisheries Act*. To determine whether you should request a review, follow the steps for proponent Self-Assessment on DFO's Projects Near Water webpage (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>).

Incomplete Requests for Review will be returned to the applicant without review by DFO. All information requested must be provided. If you attach documents to your application with additional information, you must still provide appropriate summaries in the spaces provided on the application document or your application will be considered incomplete.

Section A: Contact Information

Provide the full legal name of the proponent and primary mailing address for the proponent. When the proponent is a company, identify the full legal registered name of the company.

If applicable, also provide the contact information of the duly authorized representative of the proponent. Please note that a copy of correspondence to Contractor/Agency/Consultant will also be sent to the Proponent.

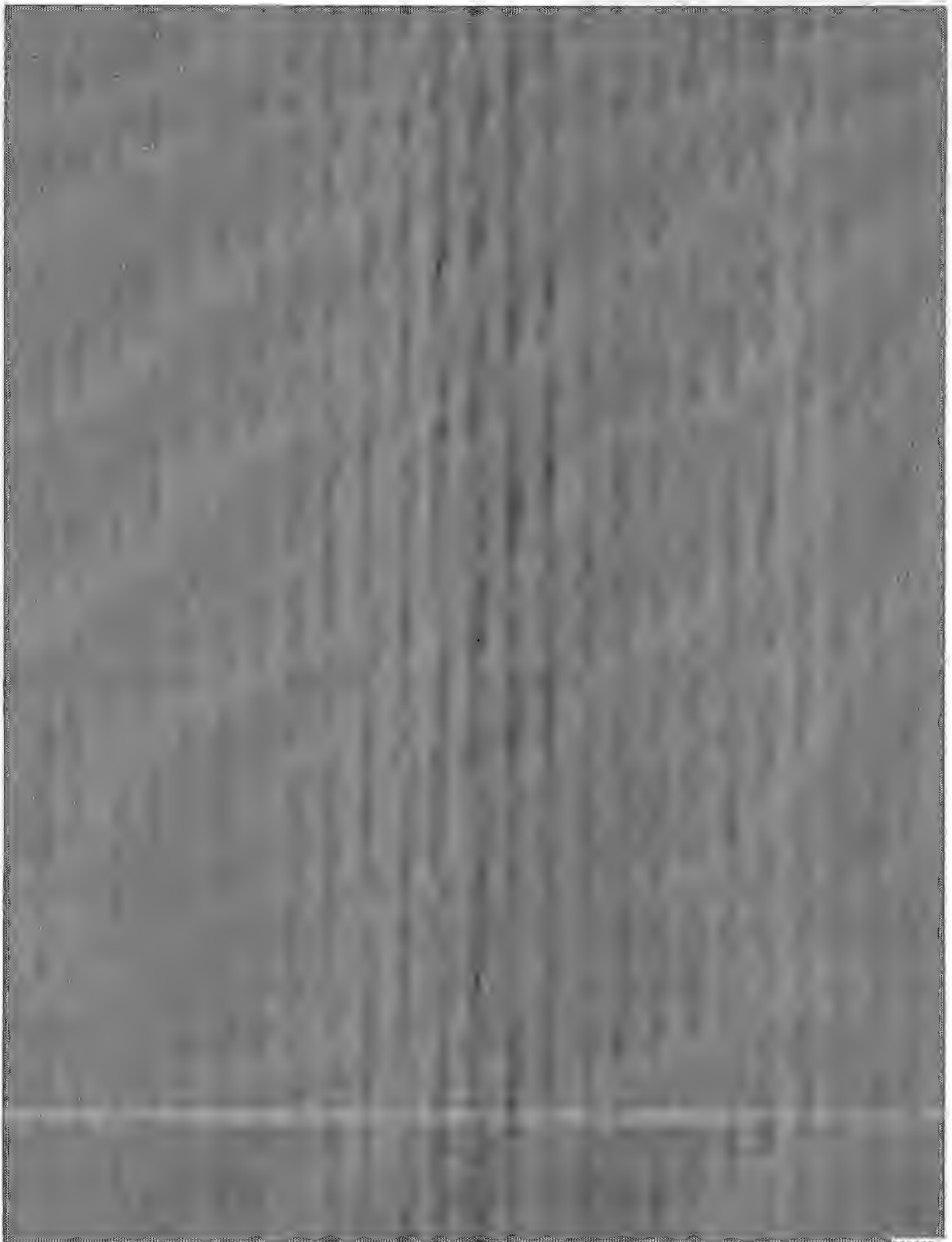
Section B: Description of Project

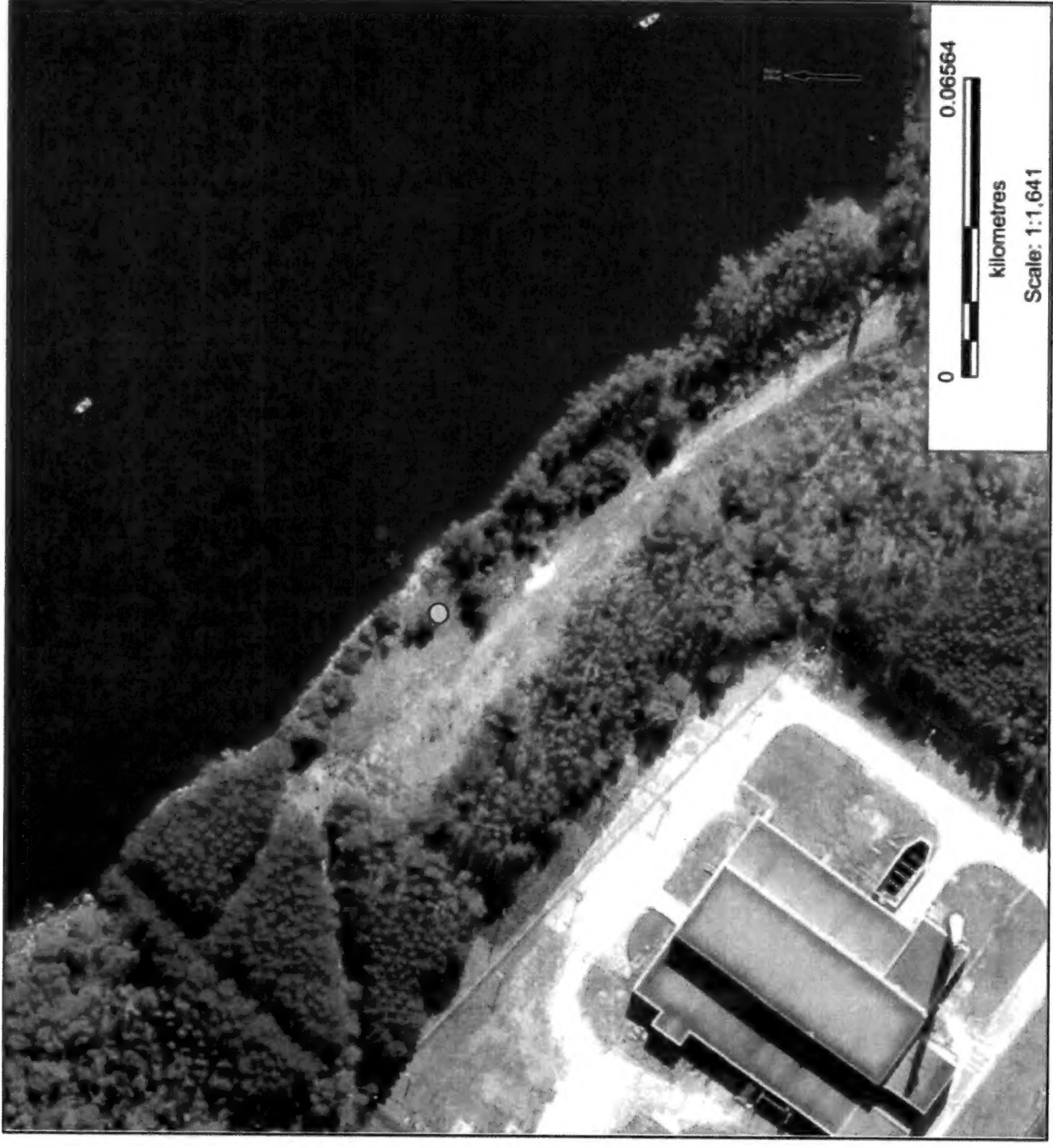
This information is meant to provide background about the proposed project. All components of the proposed project in or near water, must be described.

Proponents should provide information about all appropriate phases of the project, i.e., the construction, operation, maintenance and closure phases for the proposed project.

All details about the construction methods to be used, associated infrastructure, permanent and temporary structures, building materials to be used, machinery and equipment to be used must also be provided. For example, the construction of permanent structures may require the construction of temporary structures such as temporary dikes, in conjunction with other associated activities like the withdrawal of water, land clearing, excavation, grading, infilling, blasting, dredging, installing structures, draining or removing debris from water. Similarly, the equipment and materials to be used may include hand tools, backhoes, gravel, blocks or armor stone (provide the average diameter), concrete (indicate if pre-cast or poured in-water), steel beams or wood.

When physical structures in or near water are proposed, provide the plan and specifications of those works which would require a review.





Water Intake



Dry Fire Hydrant



Shoreline Characterization Survey



0 0.06564



kilometres

Scale: 1:1,641



